

REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are respectfully requested.

Independent claims 1, 27, 29 and 38 have been amended to clarify the features of the invention recited therein and to further distinguish the claimed invention from the references identified in the rejections discussed below. In addition, claim 33 has been cancelled without prejudice or disclaimer of the subject matter contained therein.

As mentioned above, proposed drawing amendments are submitted herewith under a separate cover letter.

Specifically, Figure 3 has been amended to appropriately label the communication conducted using the UDP and the communication conducted using the TCP. More specifically, communication occurring between reference elements 301 through 307 are now identified as UDP communications and communication occurring between reference elements 308 through 320 are now identified as TCP communications. This drawing amendment is editorial in nature and does not add new matter to the application.

Claims 1, 4-27, 29, 33, 38 and 39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Moyer (U.S. 2002/0103898), Humpleman (U.S. 6,466,971) and Sen (Internet Draft “draft-sen-midcom-fw-nat-01.txt”). This rejection is believed clearly inapplicable to amended independent claims 1, 27, 29, and 38 and the claims that depend therefrom for the following reasons.

Amended independent claim 1 recites a home terminal apparatus including a packet generation unit, a communication unit, and a protocol determination unit. Further, claim 1

recites that: (1) the communication unit (of the home terminal) sends address notification packet data to a server using a User Datagram Protocol (UDP) when the communication unit sends address notification packet data to the server apparatus (2) the packet generation unit (of the home terminal) sends a connection request packet to the server using a Transmission Control Protocol (TCP) when the communication unit sends/receives control information to/from the server. In addition, claim 1 recites that (3) when the communication unit (i) receives a notification packet from the server and (ii) repeats sending the address notification packet on a periodical basis, using the UDP; (4) the communication unit sends a connection request packet to the server using the TCP; and (5) the communication unit receives, from the server, control packet data including a control request in the TCP after a connection is established between the server and the home terminal apparatus using the TCP.

According, it is clear that claim 1 has been amended to clarify the situations where UDP and TCP communications are used, wherein the home terminal apparatus is capable of switching protocols (i.e., switching between TCP and UDP) based on usage of the information sent/received.

Initially, please note that the above-described 35 U.S.C. § 103(a) rejection acknowledges that Moyer and Sen fail to disclose or suggest having a protocol determination unit determine a communication protocol used between the home terminal apparatus and the server apparatus, as recited in claim 1. In light of the above this rejection relies on Humpleman for teaching the above-mentioned distinguishing features (1)-(5) which are admittedly lacking from Moyer and Sen. However, in view of the above-mentioned amendments to independent claim 1, which further limit the determination of the communication protocol, it is clear that Humpleman fails to

disclose or suggest the above-mentioned distinguishing features of determining the determination protocol as recited in amended independent claim 1.

Rather, Humpleman merely teaches that “if a UDP protocol is not available, a TCP protocol can be used for high bandwidth connections such as IEEE 1394” (see col. 17, lines 42-44). Thus, it is clear that, although Humpleman teaches utilizing TCP if UDP is not available, Humpleman still fails to disclose or suggest a unit capable of switching protocols based on usage of the information sent/received, such that UDP is used for sending the address notification packet repeatedly on a periodical basis and TCP is used for sending/receiving the connection request packet and the control packet data, as required by claim 1.

In other words, Humpleman merely teaches using TCP out of necessity, since UDP is not available, which fails to disclose or suggest sending data to be used as an address notification packet using UDP and sending/receiving data to be used as a connection request packet and a control packet using TCP, as recited in claim 1.

In addition, it is noted that, as required by claim 1, the lightweight UDP is used for transmission of the address notification packet data that is periodically sent, while highly reliable TCP is used when sending/receiving the control information, such as the connection request packet and the control packet data. Thus, claim 1 enables an appropriate balancing between the reduction in communication load and the improvement in communication reliability. On the other hand, the structure provided by the combination of Moyer, Sen and Humpleman merely provides conducting communication using UDP until TCP is not available, and then switching to UDP to finish a transmission, which in turn does not provide a balance between reduction in communication load and the improvement in communication reliability.

Therefore, because of the above-mentioned distinctions it is believed clear that claim 1 would not be obvious or result from any combination of Moyer, Sen and Humpleman. Furthermore, there is no disclosure or suggestion in Moyer, Sen and Humpleman or elsewhere in the prior art of record which would have caused a person of ordinary skill in the art to modify Moyer, Sen and/or Humpleman to obtain the invention of independent claim 1. Accordingly, it is respectfully submitted that independent claim 1 and claims 4-26 which depend therefrom are clearly allowable over the prior art of record.

Amended independent claims 27, 29, and 38 are directed to a system, method, and program, respectively and each recite features that correspond to the above-mentioned distinguishing features of independent claim 1 (e.g., sending/receiving using different protocols based on data usage). Thus, for the same reasons discussed above, it is respectfully submitted that independent claims 27, 29, and 38 and claim 39 which depends therefrom are allowable over Moyer, Sen and Humpleman.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance and an early notification thereof is earnestly requested. The Examiner is invited to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

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